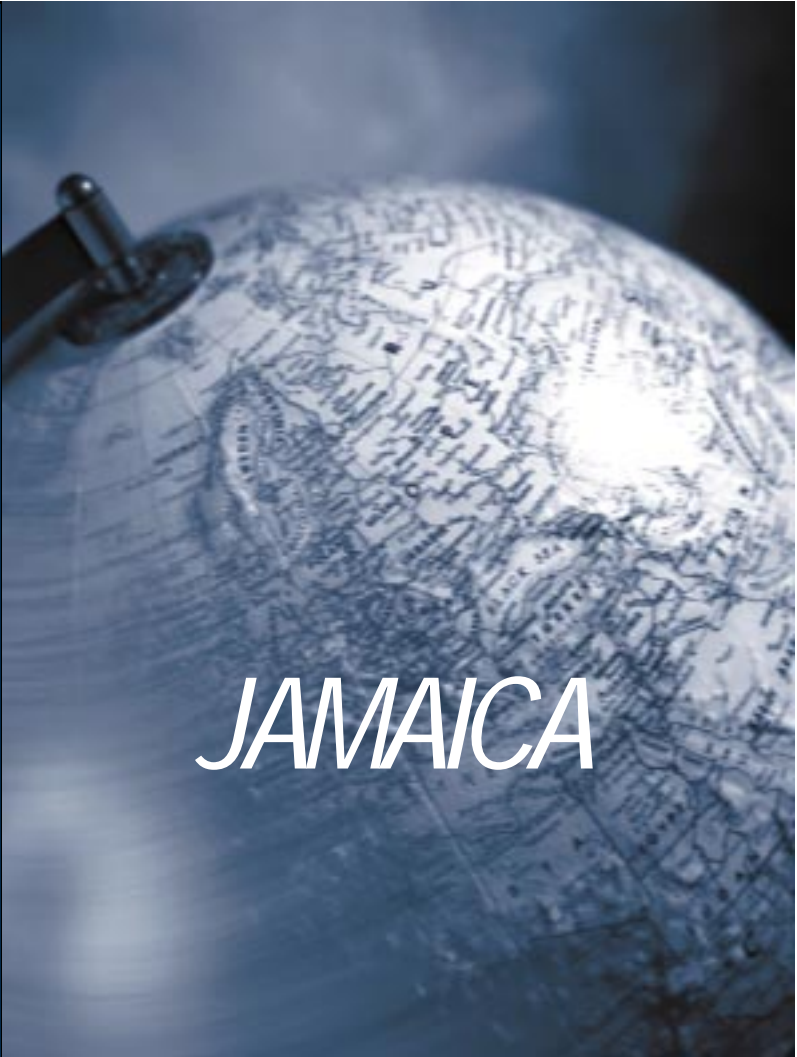


LearnLink



JAMAICA

Country Paper

Computerization and Culture

Summer 1999

LearnLink

The National Family Planning Board (NFPB) was created in 1970 as the principal agency of the Government of Jamaica to design, promote and implement family planning and population awareness programs throughout the country.

The NFPB's mission is to help achieve the development and demographic goals of Jamaica by:

- ensuring the maintenance of a reduced population growth rate;
- promoting family planning; coordinating and implementing services that contribute to everyone's reproductive health;
- ensuring ready availability of contraceptives and information about family planning; and
- providing training and support to other family planning organizations.

The NFPB also operates a nationwide family life education program.

One of NFPB's most important responsibilities is to supply a network of 350 government, private and NGO family planning clinics with contraceptives and education and social marketing materials.

The Academy for Educational Development's (AED) LearnLink project, with funding from USAID/Jamaica, was contracted to help the NFPB establish a computer and communications network throughout the institution. Such networks have shown to improve administrative efficiency, management capacity, internal communication, and professional development.

NFPB's headquarters is in Kingston, with four regional offices, nine parochial offices, three family planning clinics in 12 remote locations, and a total staff of 88 throughout Jamaica. Before the computerization initiative, the entire NFPB had only six non-networked computers for its critical tasks: one for

statistics data entry, two for accounting, two for all word processing work, and one for a contraceptives warehouse. The NFPB's needs far outweighed their computers' capacity. Professional staff work in areas involving sophisticated data analysis, research, communication materials production, resource center management, inventory, and forecasting and distribution of all contraceptive products delivered to public, private and NGO family planning clinics nation-wide. Other crucial systems include internal accounting, personnel management, and communication flows between the headquarters and regional and parochial offices.

LearnLink's Role

LearnLink's computerization intervention has led to the NFPB's increased capacity to carry out its work and positively impact Jamaican society with family planning activities. LearnLink's technical support was carried out in three stages:



- assessing the NFPB's hardware and software requirements;

- procuring and installing computer hardware, software, and peripherals in the NFPB's headquarters and regional and parochial offices; and

- training NFPB staff in the use of computers, internet resources, and the reorganization of tasks and workflow resulting from the use of technology.

LearnLink was contracted for a period of 12 months (September 1997–September 1998), during which AED Vice President of Information Technologies Glenn Strachan and several of his staff traveled often to Jamaica to provide technical assistance and hardware installation and to train NFPB staff in a number of areas.

An exhaustive assessment was conducted in which LearnLink staff interviewed NFPB and USAID/Jamaica staff, reviewed the Board's organizational structure and workflow patterns, and determined the organization's amenability to computerization. The assessment concluded that the organization was heavily information dependent and could greatly benefit from computerization. The staff was generally positive about adapting to a computer network, and many staff already had significant computer experience, though no one

Zoom in on Jamaica

Geography

Location: Caribbean, south of Cuba

Area: 10,990 sq km; slightly smaller than Connecticut

Environmental issues: deforestation; coastal waters polluted by industrial waste, sewage, and oil spills; damage to coral reefs; air pollution in Kingston from vehicle emissions.

People

Population: 2,643,678

Age structure: 0-14 years: 32%; 15-64 years: 62%; 65 years and over: 6%

Population growth rate: 0.7%

Infant mortality rate: 14.47 deaths/1,000 live births

Life expectancy at birth:

total population: 75.37 years; male: 73.01 years; female 77.84 years

Total fertility rate: 2.33 children born/woman

Ethnic groups: black 90.4%, East Indian 1.3%, white 0.2%, Chinese 0.2%, mixed 7.3%, other 0.6%

Religions: Protestant 61.3%, Roman Catholic 4%, other, including some spiritual groups 34.7%

Languages: English, Creole

Literacy: definition: age 15 and over has ever attended school; total population: 85%; male: 80.8%; female 89.1%

Economy

GDP per capita: \$3,600

Inflation: 17%

Labor force: 1.14 million

Unemployment: 16%

External debt: \$3.2 billion

Communications

Telephones: 350,000

Radio Broadcast stations: 1 AM, 7 FM

Radios: 1.973 million

Television broadcast stations: 8

Televisions: 330,000

Internet access: 2% of population; fees \$90/month

The World Factbook 1998

www.odci.gov/cia/publications/factbook/index.html

had sufficient technical skills to manage the network. The physical environment of the Kingston headquarters offices were found to be capable of supporting a network, and while the inclusion of field staff was constrained due to technical and financial issues, limited integration was feasible. Lastly and importantly, most issues relating to the design and implementation of the computer network could be provisionally decided by local staff without the need for sophisticated knowledge of the technologies.

A local area network (LAN) was designed for the NFPB's main office in Kingston, with remote dial-up connections for the contraceptives warehouse and each of the

Organizational culture and communication

One of the greatest challenges to the success of the computerization initiative was the transition from the status quo to a whole new way of thinking and operating. Initially, some staff members found that the new systems made the jobs more complicated and returned to doing simple tasks the old way rather than take the time to learn the software. Most, however, had the patience to familiarize themselves with the new systems and eventually reached a level of comfort that made them wonder how they had ever lived without computers.

Experience shows that it is relatively easy to physically link computers together to form a simple office network and train staff to use the technology. However, it can be extremely difficult to realize the full collaboration and communication benefits of a computer network.

It is important to realize that all office computer networks will function within a particular organizational and cultural context, some of which may militate against democratic communication. Not all people in an organization will welcome change, no matter how small. Some may resist the more open sharing of information that computerization facilitates while others may fear that



In the classroom

four regional offices. An independent internet service provider (ISP) was chosen to provide service based on the dependability of its satellite services and its ability to provide inexpensive internet access to the field offices. The design also called for the headquarter's telephone system to be upgraded to include a dedicated phone line for email and internet access.

their skills will become redundant and that their jobs will be at risk. Such was the case at NFPB.

It is important to note that computer applications are only tools or means for achieving more important ends. The technologies alone cannot achieve desired outcomes. To provide durable and fundamental benefits, the new technologies were coupled with changes in the values, attitudes, behaviors, skills, and knowledge that comprise organizational structure and culture.

“... people have a lot of fear of computers. You are not just changing the structure of their work; you are changing their lives. Staff members would tell me that they were afraid of . . . [being] replaced by a machine.”

*Glenn Strachan, AED Vice President of
Information Technologies*

Imperative in the adoption of computer systems is an examination of workflow patterns and traditional methodologies for getting things done. NFPB staff were required to analyze virtually everything they did to see how computers would be able to streamline a process or even eliminate certain processes. They also examined their typical work behaviors and tried to find ways to adapt them to the new

Rosie was a new learner and very quiet in class until the PowerPoint instruction began. Tawna, one of the instructors, related her story. “It was as if she blossomed. She was a very visual learner and an artist. She had designed and collected some prints related to family planning and NFPB. She learned how to photograph with a digital camera and inserted the artwork into her presentations.”

technologies. People often retain certain behaviors because they are comfortable, tried and tested. Often, as computers are introduced into an uncomputerized environment, users will simply overlay old behavior patterns onto these new machines and never fully realize the benefits of computerization.

One of the most important benefits of office computer networks is their ability to provide staff with new and easy ways of communicating and collaborating with each other. Email can create a democratic communication system whereby everyone on the network is equally accessible to others in an office. It also can enable users to increase the frequency of communication. Experience shows that eventually the quality of communication, both electronic and face-to-face, improves with the introduction of email.

Organizational changes were formalized into “lessons” whenever possible. This proved to be a challenge because the technology was new and the organizational

The staff began to slowly surf the web and learn about the internet. They were asked, "How many articles do you think you could download on population activities in Jamaica?" There were strong audible responses when Glenn pulled up 243 articles from the Johns Hopkins University database alone.

climate of using a network was initially beyond a majority of the staff's frame of reference. Saving files on shared drives, for example, or using email to facilitate communication and coordinate appointments were entirely unknown procedures.

Consequently, LearnLink instructors integrated organizational issues into the application training sessions. They placed a great deal of emphasis on class demonstrations, where class exercises were saved on the common drive, and participants were required to navigate the drive for each lesson. Class scheduling and communications were conducted via email so that students were required to familiarize themselves with this new way of acquiring information. Throughout the training period, all individuals were equally responsible for centralized equipment — for example, everyone must load the paper bins on the printers when necessary, regardless of who used the paper. Resources and accountability were shared among all users and across the organization

as a whole and not attached to a particular department or individual.

Training

Before arriving at the NFPB in Jamaica, the LearnLink core team and instructors met in Washington, D.C., to develop an overall training strategy. LearnLink staff distributed a pre-registration survey to NFPB several weeks before the training was scheduled to begin. Based on responses to the survey, it was apparent that the majority of the staff had little or no experience with computers. A training plan was designed to provide all students with basic, comprehensive skills in several software applications, including Microsoft Office '97 (Word, Excel, Outlook, PowerPoint, and Access), Windows '95, and Netscape Navigator. The team also planned to offer brief introductory courses for SPSS, MS Project, PageMaker, and PhotoShop.

Based on the computer experience and knowledge described in the pre-registration surveys, different levels of training sessions were required. NFPB staff were divided into 10 groups of four to six students, and each staff member received two hours of training per day. Of special note was the participants' enthusiastic attitude. Initially the majority were somewhat anxious about their lack of knowledge and expressed some fears. However, they were willing and eager to attend the classes despite their concerns and busy schedules.

Sustainability and Ownership

All computer networks require maintenance. The challenge for Glenn and his staff was to design a network system that would not burden the NFPB with unanticipated costs. Every piece of equipment was chosen with the intention of ensuring the network system's long-term viability. At the same time, cost constraints are a reality, so every effort was made to achieve a balance between the ever-present pressure to buy affordable equipment while maintaining high quality standards.

Tied into the concept of financial sustainability is the importance of ownership. When individuals share equal responsibility for a system, in this case a computer network system, they share accountability and ownership. Thus, they ensure its continued evolution and sustainability.

Every effort was made to anticipate the costs of ownership for a networking system. However, there were some issues that were not stressed strongly enough. Initially, the NFPB did not understand how critical it was that the person filling the network administrator position be experienced enough to deal with the daily networking issues that arise. This issue is central to the concept of sustainability. It is essential that the network administrator have full responsibility for the network and be given access to the resources that are required to support it.



Hands-on learning

Of greater concern is keeping the staff motivated to continue using their computer skills and equipment. The organization might assign a particular staff member to manage changes as the NFPB continues to computerize its tasks. Another approach is to slightly modify several of the job descriptions to include the necessary computer skills required in a particular position. This helps ensure that the computer skills are not lost if an employee leaves the organization. The new employee would have the requisite skills or be expected to learn them.

The support and enthusiasm of NFPB senior staff was crucial to the success of this initiative. Ms. Chevannes, Director of NFPB, was behind the networking initiative since its inception. She was involved in all phases of NFPB's development, and her staff agreed that she is the "glue that keeps everything together." Dr. McDonald, NFPB's Medical Director, is a strong and effective administrator who understands the need for birth control and family

planning in Jamaica. She was particularly interested in the potential of SPSS software for research and is using it extensively for sociological data analysis.

Was it all Worth it?

The NFPB staff's lack of experience with computerization as a group initially made it difficult for them to understand the consequences of using computers for the NFPB as a whole. Discussions about networking, sharing files and directories, and maintaining organization-wide appointments were distant to their frame of reference and overshadowed by their ambition to learn the computer skills at the individual level.

However, there is evidence that the environment has changed in incremental steps. Various issues that affect the entire group are being questioned by the staff members themselves. For example, having the printer as a central unit for the entire organization brought out several points needing attention. Should paper become a central resource or should senior managers devise another method of submitting paper from each department budget? Who is responsible for filling the printer's paper tray? How do they manage paper waste — by individuals, departments, or the organization as a whole? These questions and others have been and are being addressed to help streamline the operations of the entire NFPB.

It is already possible to view the short-term results of this computerization initiative and make a reasonable forecast of its effects over time. In general, the new skills that have been acquired to utilize the information technologies at the NFPB show definite signs of improving the flow of information for the organization and helping the staff perform their tasks in implementing family planning programs. Employees are now able to explore resources on family planning and reproductive health on the internet. They can communicate with other professionals in the field quickly and inexpensively via email, and they are able to disseminate information to each other and the public through professional reports, presentations and publications. As far as internal operations are concerned, administrative and financial resources are more efficiently managed using the various software applications.

These changes have had a positive impact at both the individual and organizational levels. The time saved by the staff in computerizing some repetitive tasks leaves more time open for them to pursue other activities such as research, project development, and evaluation of programs. As an organization, the NFPB is augmenting the breadth and quality of its projects and managing them productively through the use of the new network.

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